1985

Nebraska Summary: S006 Deutz-Allis 6275

Nebraska Tractor Test Laboratory
University of Nebraska-Lincoln, tractortestlab@unl.edu

SUMMARY OF OECD TEST 997—NEBRASKA SUMMARY 006
DEUTZ FAHR DX 3.90 DIESEL
ALSO DEUTZ ALLIS 6275 DIESEL
12 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Fuel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1084 rpm)					
70.9 *(52.9)*	2350	4.14 *(15.67)*	0.411 *(0.250)*	17.16 *(3.38)*	
Standard Power Take-off Speed (1000 rpm)					
69.2 *(51.6)*	2167	3.93 *(14.87)*	0.399 *(0.243)*	17.61 *(3.47)*	Air temperature
VARYING POWER AND FUEL CONSUMPTION					70°F *(21°C)*
61.2 *(45.6)*	2381	3.57 *(13.50)*	0.411 *(0.250)*	17.16 *(3.38)*	
....	2463	1.16 *(4.38)*	....	....	Relative humidity
31.0 *(23.1)*	2416	2.27 *(8.61)*	0.516 *(0.314)*	13.65 *(2.69)*	90%
70.9 *(52.9)*	2350	4.14 *(15.67)*	0.411 *(0.250)*	17.16 *(3.38)*	Barometer
15.7 *(11.7)*	2438	1.67 *(6.31)*	0.750 *(0.456)*	9.39 *(1.85)*	29.5" Hg *(99.5 kPa)*
46.3 *(34.5)*	2403	2.90 *(10.99)*	0.442 *(0.269)*	15.94 *(3.14)*	

Maximum Torque 187 lb. ft. *(254 Nm)* @ 1603 RPM
Maximum Torque Rise 18%

DRAWBAR PERFORMANCE (Front Drive Engaged)

Power Hp *(kW)*	Drawbar pull *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power—Five Hours 5th (4L) Gear									
46.8 *(34.9)*	3995 *(17.78)*	4.39 *(7.06)*	2396	2.7	0.506 *(0.308)*	13.86 *(2.73)*	118 *(48)*	41 *(5)*	29.3 *(99.0)*
MAXIMUM POWER IN SELECTED GEARS									
2nd Gear (2L)									
54.7 *(40.8)*	11055 *(49.18)*	1.86 *(2.99)*	2369	15.0	0.521 *(0.317)*	13.50 *(2.66)*	180 *(82)*	55 *(13)*	29.8 *(100.5)*
3rd Gear (3L)									
60.9 *(45.4)*	8055 *(35.84)*	2.83 *(4.56)*	2355	6.5	0.473 *(0.288)*	14.87 *(2.93)*	185 *(85)*	55 *(13)*	29.8 *(100.5)*
4th Gear (1M)									
60.3 *(45.0)*	7160 *(31.86)*	3.16 *(5.08)*	2348	5.4	0.478 *(0.291)*	14.72 *(2.90)*	198 *(92)*	59 *(15)*	29.8 *(100.5)*
5th Gear (4L)									
60.6 *(45.2)*	5330 *(23.70)*	4.26 *(6.86)*	2351	3.6	0.482 *(0.293)*	14.62 *(2.88)*	196 *(91)*	59 *(15)*	29.8 *(100.5)*
6th Gear (2M)									
60.5 *(45.1)*	4530 *(20.14)*	5.01 *(8.06)*	2351	3.0	0.487 *(0.296)*	14.47 *(2.85)*	192 *(89)*	43 *(6)*	29.8 *(100.6)*
7th Gear (1H)									
59.4 *(44.3)*	3795 *(16.89)*	5.87 *(9.45)*	2351	2.5	0.495 *(0.301)*	14.21 *(2.80)*	192 *(89)*	43 *(6)*	29.4 *(99.1)*

Location of Test: DLG Testing Station for Agricultural Machinery, West Germany

Dates of Test: August until November, 1985

Manufacturer: Klockner-Humboldt-Deutz AG, 5000 Cologne 80, West Germany

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.846 **Fuel weight** 7.04 lbs/gal *(0.844 kg/l)* **Oil SAE** 15W40 **Oil Consumption for 10 hours** 1.28 lb *(580 gm)* **Transmission lubricant** SAE 15W40 **Final drive lubricant** SAE 90 API GL-5.

ENGINE: Make Deutz Diesel **Type** four cylinder vertical **Serial No.** 6888454 **Crankshaft** lengthwise **Rated engine rpm** 2350 **Bore and stroke** 4.016" × 4.921" *(102 mm × 125 mm)* **Compression ratio** 17 to 1 **Displacement** 249 cu in *(4086 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** dry paper element filter with precleaner **Oil filter** full flow cartridge **Oil cooler** separate radiators for crankcase and hydraulic oils **Fuel filter** replaceable cartridge **Muffler** vertical.

CHASSIS: Type four wheel drive **Serial No.** 7760 0003 **Tread width** rear 59.8" *(1520 mm)* to 79.5" *(2020 mm)* front 59.1" *(1500 mm)* to 65.0" *(1650 mm)* **Wheel base** 94.3" *(2394 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.37 *(2.21)* second 2.13 *(3.43)* third 2.98 *(4.79)* fourth 3.29 *(5.30)* fifth 4.37 *(7.04)* sixth 5.10 *(8.21)* seventh 6.01 *(9.67)* eighth 7.13 *(11.47)* ninth 9.32 *(15.00)* tenth 10.48 *(16.86)* eleventh 13.01 *(20.94)* twelfth 19.13 *(30.79)* reverse 4.42 *(7.11)*, 6.85 *(11.02,)* 9.56 *(15.39)*, 14.06 *(22.62)*, **Clutch** dry dual disc operated by foot pedal **Brakes** drum and shoe hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2025 engine rpm and 1000 rpm at 2167 engine rpm **Unladen tractor mass** 7880 lb *(3575 kg)*.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

TRACTOR SOUND LEVEL	dB(A)
Maximum sound level	82.0
Bystander in 12th (4H) gear	88.5

CENTER OF GRAVITY

Horizontal distance forward from centerline of rear wheels	36.8″ in *(935 mm)*
Vertical distance above roadway	35.9″ in *(913 mm)*
Horizontal distance from center of rear wheel tread 0.4″ *(10 mm)* to the left	

TURNING ON A CONCRETE SURFACE

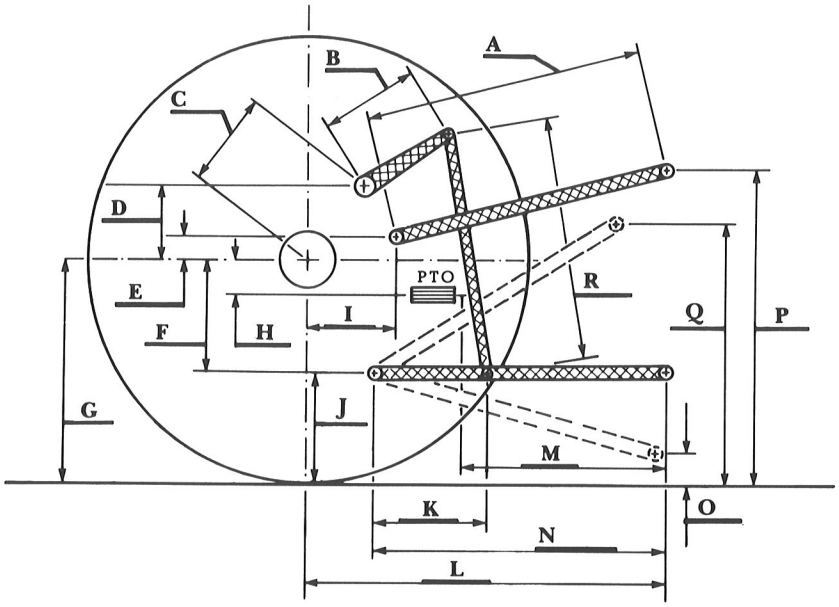
Turning radius—with brake applied right 181″ *(4.60 m)* left 157″ *(4.00 m)*
—without brake right 213″ *(5.41 m)* left 184″ *(4.68 m)*
Turning space radius—with brake applied right 195″ *(4.95 m)* left 172″ *(4.37 m)*
—without brake right 227″ *(5.76 m)* left 199″ *(5.05 m)*

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 16.9R34; 6; 12 *(80)*	Two 16.9R34; 6; 12 *(80)*
Ballast	—Liquid (total)	980 lb *(445 kg)*	None
	—Cast Iron (total)	1080 lb *(490 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 13.6R24; 8; 13 *(90)*	Two 13.6R24; 8; 13 *(90)*
Ballast	—Liquid (total)	750 lb *(340 kg)*	None
	—Cast Iron (total)	175 lb *(80 kg)*	None
Height of Drawbar		27.5 in *(700 mm)*	21.5 in *(540 mm)*
Static Weight	—Rear	6900 lb *(3130 kg)*	4895 lb *(2220 kg)*
	—Front	4125 lb *(1870 kg)*	3140 lb *(1425 kg)*
	—Total	11025 lb *(5000 kg)*	8035 lb *(3645 kg)*

THREE POINT HITCH PERFORMANCE (STATIC TEST)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	4565 lbs *(20.30 kN)*
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2500 psi *(176 Bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	11.4 GPM *(43.1 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	10.6 GPM *(40.3 l/min)*
Delivery pressure:	2245 psi *(158 Bar)*
Power:	14.2 Hp *(10.6 kW)*



Hitch Dimensions as Tested — No Load

	inch	*mm*
A	26.0	*660*
B	11.0	*280*
C	16.5	*418*
D	16.0	*407*
E	9.4	*240*
F	7.1	*180*
G	29.3	*745*
H	2.2	*57*
I	12.2	*310*
J	22.2	*565*
K	20.2	*512*
L	38.4	*975*
M	21.7	*550*
N	37.0	*940*
O	7.9	*200*
P	41.2	*1048*
Q	34.4	*873*
R	28.0	*710*

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures.
The cooling medium temperatures were taken at the engine cylinder head.
With engaged front wheel drive the largest front tyres 13.6-24 cause in combination with rear tyres 16.9-34 a considerable forward speed advance of the front axle. This may actuate the safety clutch of the front wheel drive. Therefore during drawbar tests with ballast a relatively high rear axle load was chosen.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **997,** Nebraska Summary 006, June 3. 1987.

LOUIS I. LEVITICUS
Engineer-in-Charge

K. VON BARGEN
W. E. SPLINTER
ROBERT D. GRISSO JR.
Board of Tractor Test Engineers

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln
Irvin T. Omtvedt, Dean and Director